

**Division of Transportation Planning  
Office of State Planning  
California Transportation Investment System (CTIS) Tool**

**FACT SHEET**

**PURPOSE:**



To visually display, using GIS software and methodology, where transportation investment is currently underway (programmed) and where it is planned over the next 20 years. Included in this tool are highway, local, rail, airport, bicycle, pedestrian, and transit projects at both the State and regional levels. This sketch level tool will assist the California Department of Transportation (Department) and regional planners in identifying and assessing gaps, overlaps and inconsistencies in planned transportation projects, and opportunities for improved timing and coordination of projects, as well as providing a comprehensive representation of existing system plans as input to the 2002 California Transportation Plan.

**PROCESS:**

Information on programmed projects (projects to which funds have been committed) was taken from the California Transportation Improvement Program System (CTIPS February 1998) database, which includes State Transportation Improvement Program (STIP) and State Highway and Operations Protection Program (SHOPP) projects. This data was reviewed and verified by the Department's District staff in consultation with their regional agency partners.

Planned projects were taken from approved (as of January 1, 2000) Metropolitan and Regional Transportation Plans and from several Caltrans system plans (Interregional Transportation Strategic Plan and the 1998 California Aviation System Plan). District staff working with their respective regional agencies collected data on regional projects.

**BACKGROUND/PLAYERS:**

In December of 1998, as a first step in initiating the update of the California Transportation Plan, a team comprised of Department staff and regional agency partners identified the need to integrate existing long-range plans of both the State and regional transportation planning agencies by creating a map, using GIS software, of the current and resulting transportation system.



A technical advisory committee (TAC) provided suggestions on tool design and data collection process and was comprised of Regional Transportation Planning Agency (RTPA) representatives and District staff, as well as representatives from other Headquarters' programs within the Department. A policy advisory committee (PAC) provided overall project direction and scope and included RTPA Executive Directors and Department management.

In January of 2001, the first official version (v1.1) of the California Transportation Investment System (CTIS) GIS tool was released. The current version of the tool (v1.3.1) was finalized in March of 2002 and includes updated programmed project data (CTIPS database download May 2001) and several enhancements. Minor corrections and several improvements were made in June leading to the current version (v1.3.2).

### ***OBTAINING THE TOOL:***

The CTIS tool and support documents, including a quick guide, data dictionary and hypertext Users' Guide, can be downloaded from the Department's Division of Transportation Planning website at <http://www.dot.ca.gov/hq/tpp/offices/osp/ctis.htm>. Users must have ESRI's ArcView software (version 3.1 or 3.2) to use the tool.



## California Transportation Investment System (CTIS) Tool

### TOOL OVERVIEW AND FEATURES

#### Overview

The CTIS Tool is a customized ArcView project designed to display the Planned and Programmed California Transportation Investment System (CTIS) projects. The Tool contains 10 thematic views. The CTIS program and user community developed the content and display characteristics of these views. Each view has one customized menu and 5 customized buttons (6 customized buttons in the Line Year Projects view).

#### The ten views are:

- Airport by Functional Class
- Chartered Projects (by County)
- Existing and Planned Projects
- Line Year Projects
- Non-MPO Projects
- Projects by Legislative Boundaries
- Projects by Population
- Projects by Total Cost
- Projects by Urbanized areas
- Rail

#### The project data layers and their sources:

*Planned Highway Projects*—one layer for point and another for linear projects on the State Highway System.  
Source: Regional Transportation Plans (RTPs) (latest available at time of data entry) or Caltrans 1998 Interregional Transportation Strategic Plan (ITSP).

*Programmed Highway Projects*--one layer for point and another for linear projects on the State Highway System.  
Source: Caltrans Transportation Improvement Program System (CTIPS) download May 2001.

*Planned Bike and Pedestrian, Planning Funds, Reserve Funds and Transit Projects*  
Source: RTPs (latest available at time of data entry) or 1998 ITSP.

*Programmed Bike and Pedestrian, Planning Funds, Reserve Funds and Transit Projects*  
Source: CTIPS download May 2001.

*Local Projects*—both planned and programmed projects off the State Highway System.  
Source: RTPs (latest available at time of data entry), 1998 ITSP or CTIPS download May 2001.

*Rail Projects*—programmed intercity and commuter rail projects.  
Source: CTIPS download May 2001.

*Airport Projects*—planned projects.  
Source: California Aviation System Plan (CASP), Capital Improvement Program 1998.

*Chartered Projects* (not spatial)--planned or programmed projects not "sited" on a view.  
Source: RTPs (latest available at time of data entry), 1998 ITSP or CTIPS download May 2001.

#### Customized Graphical User Interface (GUI)

##### Customized Menu



The customized "CTIS Views" menu allows the user to switch to a view by selecting the name of the view in the pull-down list rather than using the full-screen window that appears when the tool is first opened.



## Customized Buttons

The customized buttons allow the user to perform some common functions and specialized analysis of the data with the push of a single button.



### Open View Pick List

The "Open View Pick List" button opens the full screen pick list that appears when the project is first opened. This button is visible on all views.



### Highway GAP Project Query

This button displays highway projects that have been coded in the Purpose Code field as being a gap closure project. The themes queried are the Planned Highway Point ("Planned Hwy Projects (points)"), Planned Highway Linear ("Planned Hwy Projects (linear)"), Programmed Highway Point ("Programmed Hwy Projects (points)"), and Programmed Highway Linear ("Programmed Hwy Projects (linear)"). This button is visible on all views.



### Select Projects by Distance

Clicking on this button opens a dialog box requesting input by the user. It will select Highway, Airport, Local and Rail projects that are a user specified distance (in miles) from Highway Border Crossings, Airports, Ports or Railroad Stations. The user can select a single or multiple feature(s) by holding down the shift key while selecting the desired feature(s). Clicking on the OK button closes the dialog box highlights selected projects. This button is visible on all views.



### Sum Project Costs

This button generates a display of the total number and total cost of projects by theme for the geography identified by the user. The sum total at the bottom is the sum of the totals reported by category. Clicking on this button opens a dialog box requesting input by the user. The available geography is Statewide, individual CALTRANS District, individual County or individual Regional Transportation Planning Agency (RTPA). The "Unit of Analysis" is Statewide, District, County or RTPA. The Area is visible only when the unit of analysis is not Statewide. The Area is a pull-down list created from the data that is populated in the database, and is relevant to the unit of analysis selected (e.g., selecting RTPA results in a full listing of the State's 44 regional transportation planning agencies). This button is visible on all views.



### Highway Project Cost Chart

This button displays a histogram of the summary project costs by Purpose Code for the user-defined geography. The available geography is Statewide, individual CALTRANS District, individual County or individual Regional Transportation Planning Agency (RTPA). The "Unit of Analysis" is Statewide, District, County or RTPA. The Area is visible only when the unit of analysis is not Statewide. The Area is a pull-down list created from the data that is populated in the database, and is relevant to the unit of analysis selected. This button is visible on all views.



### Show Charted Projects Table

This button opens the "Charted Projects" table in a window that the user can use to view the individual charted projects. The user can use the standard query, sort and promote tools in evaluating the data. This button is visible on all views.



### Highway Project Line Year Summary

This button is only visible on the Line Year Projects view. The button generates the display of Highway project data in two histograms: total number of projects by line year and total cost of projects by line year.